

REMARKS

In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application. This response is fully responsive to all issues raised in the Office Action mailed October 6,
5 2005.

Rejections Under 35 U.S.C. §103

Claims 1-30, 34, and 36-40 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,260,120 to Blumenau
10 (hereinafter, "Blumenau") in view of U.S. Patent No. 5,404,361 to Carsoso ("Carsoso"). Applicant respectfully traverses these rejections. Applicant traverses these rejections. To establish a *prima facie* case of obviousness the Action must establish that all limitations recited in the claim are disclosed or suggested by the cited reference. See, MPEP 2143.03. Applicant asserts
15 that the Action has failed to establish a *prima facie* case of obviousness because Blumenau, alone or in combination with Carsoso, fails to disclose or suggest numerous features recited in each of independent claims 1, 12, 24, and 31, and in the dependent claims.

20 Claims 1-11

Independent claim 1 includes limitations directed to "an agent connected to the host, the agent having volatile memory for storing a first copy of a table, the table having entries to map virtual disk positions to locations on the storage devices." The first Action asserted that Blumenau
25 disclosed this limitation, and cited Fig. 30 and col. 30, lines 53-55 and col. 32

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lines 43-55 to support the assertion. Applicants traversed the rejection. In response, the second Action asserted that Blumenau disclosed this limitation, and cited Figs. 4, 22, 23, 24, 25,, column 25, lines 50-56, and column 32, lines 43-45. Applicants traversed the rejection. In response, this
5 Action asserts that Blumenau discloses this limitation, and now cites Figs. 4, 23-25, 30, column 14, lines 23-31, and col. 25, lines 50-56 and col. 32 lines 43-55 to support the assertion.

Applicants disagree. The cited text reads as follows:

10 For example, a volume access table 80 and volume lists 81 are stored in the memory 77. The volume access table specifies a correspondence between hosts and respective lists of volumes accessible to the hosts. A back-up copy of the volume access table and volume list could be stored in one of the storage volumes of the cached storage subsystem.

15 The random access memory 236 is further programmed with volume access and mapping information 246. The volume access information indicates a respective set of storage LUNs that any host can access by requests addressed to the virtual
20 ports 240, 241.

Contrary to the assertion in the Action, nothing in this text discloses or suggests an agent connected to the host, the agent having volatile memory for storing a first copy of a table, the table having entries to map virtual disk
25 positions to locations on the storage devices, as recited in claim 1.

Independent claim 1 further includes limitations directed to "a controller coupled to the agent, the controller having non-volatile memory for storing a second copy of the table, the controller intermittently causing contents of the first copy of the table to be replaced by contents of the
30 second copy of the table." The first Action asserted that Blumenau discloses this limitation, and cited Figs. 4-5 and col. 14, lines 27-31 and col. 25 lines 1-7 to support the assertion. Applicants traversed the rejection. In response,

the second Action asserted that Blumenau discloses this limitation, and cited Fig. 21, item 27, and column 32, lines 43-54 to support the assertion.

Applicants traversed the rejection. In response, the present Action asserts that Blumenau discloses this limitation, and now cites Fig. 21, item 27,

5 column 14, lines 31-33, column 21, lines 35-40, and col. 32 lines 43-54 to support the assertion.

Applicants disagree. The cited text reads as follows:

10 A back-up copy of the volume access table and volume list could be stored in one of the storage volumes of the cached storage subsystem.

15 In step 166, execution continues to step 167 if the system administrator has no more group names to enter; otherwise, execution loop back to step 161. In step 167, the volume access table and volume lists are copied to a storage volume as back-up for port adapter error recovery or diagnostic purposes, and the routine if finished.

20 A primary copy of the configuration information for the volumes accessible to a host is kept in the storage subsystem and on the host. The host should be able to access the primary copy on the storage subsystem if a host's local copy is not available. However, an exception to this would be a host that is responsible for storing the primary copy of another host. The
25 configuration information should be accessed through read and write commands and should be protected against accidental writes. For example, the configuration information is stored in a predefined logical volume, such as a volume accessed at LUN0, that functions as a gatekeeper device.

30 Contrary to the assertion in the Action, nothing in this text discloses or suggests a controller coupled to the agent, the controller having non-volatile memory for storing a second copy of the table, the controller intermittently causing contents of the first copy of the table to be replaced by contents of
35 the second copy of the table, as recited in claim 1.

Further, nothing in Blumenau, alone or in combination with Casorso, discloses or suggests that the controller intermittently causes contents of the

first table to be replaced by contents of the second table, as recited in claim

1. The Action now appears to assert that this limitation is inherent in Blumenau. To the extent that the Examiner's comments indicate that the Examiner considers limitation of claims 1 taught by inherency, Applicants
5 assert that the record fails to provide any factual support for a finding of teaching by inherency. To prove inherency, the Examiner must establish that the system disclosed in Blumenau *necessarily* includes the structure recited in claim 1. Continental Can Co. U.S.A. v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991). There is no such showing on the record.

10 In sum, contrary to the assertion in the Action, Blumenau, alone or in combination with Casorso, neither discloses nor suggests the limitations of independent claim 1. Accordingly, Blumenau, alone or in combination with Casorso, cannot render obvious independent claim 1.

Dependent claims 2-11 depend from claim 1 and are allowable by
15 virtue of this dependency, and by virtue of the limitations recited therein.

Claims 12-23

Independent claim 12 recites limitations directed to "an agent connected to a host computer, the agent having a volatile memory module
20 for storing a first copy of a table having entries to map a virtual disk position to a storage location on the storage devices and a plurality of variables indicating states of the respective entries" and "a controller coupled to the agent, the controller having non-volatile memory for storing a second copy of the table, the controller intermittently causing contents of the first copy of the
25 table to be replaced by contents of the second copy of the table." These

limitations are similar in scope to the limitations recited in claim 1. The final Action rejected independent claim 12 "for similar reasons as claims 1-5 and 8-11." Applicants traverse the rejection, and assert the arguments asserted above with respect to claim 1.

- 5 Dependent claims 13-23 depend from claim 12 and are allowable by virtue of this dependency, and by virtue of the limitations recited therein.

Claims 24-30

- 10 Independent claim 24 is directed to a method for performing an operation on a virtual disk coupled to a host within a network, and recites:

- specifying a block on the virtual disk within the operation;
 accessing a table mapping the block to a storage location on a storage device;
15 issuing a corresponding operation to the storage device, wherein the corresponding operation correlates to the operation on the virtual disk;
 completing the corresponding operation; and
20 presenting the completed corresponding operation to the virtual disk.

- The Action rejected claim 24 under 35 U.S.C. §103(a) as being rendered obvious by Blumanau in combination with Casorso. Applicant traverses the rejection, and asserts that the Action fails to make a *prima*
25 *facie* showing of obviousness. The Action appears to assert that Figs. 23-25 disclose the limitations of "specifying a block on the virtual disk within the operation" and "accessing a table mapping the block to a storage location on a storage device." Applicants traverse the rejection. A close inspection of Blumenau reveals that Figs. 23-25 are examples of mapping tables. Figs.
30 23-25 neither disclose nor suggest "specifying a block on the virtual disk

within the operation” and “accessing a table mapping the block to a storage location on a storage device” as recited in claim 24.

Dependent claims 25-30 depend from claim 24 and are allowable by virtue of this dependency, and by virtue of the limitations recited therein.

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Claims 34, 36-40

Independent claim 34 recites limitations similar to those recited in independent claim 24. The final Action rejected independent claim 34 “for similar reasons as claims 24 and 31.” Applicants traverse the rejection, and
10 assert the arguments asserted above with respect to claim 24.

Dependent claims 36-40 depend from claim 34 and are allowable by virtue of this dependency, and by virtue of the limitations recited therein.

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CONCLUSION

This application is in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the present application.

Should any issue remain that prevents immediate issuance of the

5 application, the Examiner is encouraged to contact the undersigned attorney to discuss the unresolved issue.

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Respectfully Submitted,
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